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IP Series

NVR USER MANUAL

PROVISION-ISR

AHD DVR

User Manual

For H.264 AHD digital video recorder

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CAUTION

- Please read this user manual carefully to ensure that you can use the device correctly and safely.
- There may be several technically incorrect places or printing errors in this manual. The updates will be added into the new version of this manual. The contents of this manual are subject to change without notice.
- This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using. If the device doesn't work for a long time, pull out the plug from the socket.
- Do not install this device near any heat sources such as radiators, heat registers, stoves or other device that produce heat.
- Do not install this device near water. Clean only with a dry cloth.
- Place the device in a well-ventilated area.
- Do not power off the DVR at normal recording condition! The correct operation to shut off DVR is to stop recording firstly, and then to select "shut-down" button at the right of the menu bar to exit, and finally to cut off the power.
- This machine is indoor using equipment. Do not expose the machine in rain or moist environment. In case any solid or liquid get into the machine's case, please cut off the power supply immediately, and ask for qualified technicians to check the machine before restart
- Do not try to repair the device by yourself without technical aid or approval.
- When this product is in use, the relevant contents of Microsoft, Apple and Google will be involved in. The pictures and screenshots in this manual are only used to explain the usage of our product. The ownerships of trademarks, logos and other intellectual properties related to Microsoft, Apple and Google shall belong to the above-mentioned companies.
- This manual is suitable for AHD digital video recorders. All examples and pictures used in the manual are from 16-channel DVR.

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1 Introduction

1.1 DVR Introduction

This model is standard 720P/960H high resolution AHD DVR (Analog High Definition Digital Video Recorder), which adopts high performance video processing chips and embedded Linux system. Meanwhile, it utilizes many most advanced technologies, such as standard H.264 with low bit rate, dual stream, SATA interface, VGA output mouse supported, IE browser supported with full remote control, mobile view (by phones), etc., which ensure its powerful functions and high stability. Due to these distinctive characteristics, it is widely used in banks, telecommunication, transportation, factories, warehouse, and irrigation and so on.

1.2 Main Features

COMPRESSION FORMAT

- Standard H.264 compression with low bit rate and better image quality

LIVE SURVEILLANCE

- Supports HDMI/ VGA output
- Supports Analog/AHD video input, the odd and even channels (such as Channel 1 and Channel 2, Channel 3 and Channel 4, etc.) must be connected to the same video source (960H or AHD signal may be optional)
- Supports channel security by hiding live display
- Display the local record state and basic information
- Supports USB to make full control

RECORD MEDIA

- Supports one SATA HDD to record for a longer time without any limitation

BACKUP

- Supports USB 2.0 devices to backup
- Supports saving recorded files with AVI standard format to a remote computer through internet

RECORD & PLAYBACK

- Record modes: Manual, Schedule and Motion detection recording
- Supports recycle after HDD full
- Resolution, frame rate and picture quality are adjustable
- 1 audio channels available
- Three record search modes: time search, event search and image search
- 4/8 channels playback simultaneously
- Supports deleting and locking the recorded files one by one
- Supports remote playback in Network Client through LAN or internet

ALARM

- Supports schedule for motion detection
- Supports pre-recording and post recording

PTZ CONTROL

- Supports various PTZ protocols
- Supports 128 PTZ presets and 8 auto cruise tracks
- Supports remote PTZ control through internet

SECURITY

- Customize user right: log search, system setup, two way audio, file management, disk management, remote login, live view, manual record, playback, PTZ control and remote live view
- Supports 1 administrator and 63 users
- Supports event log recording and checking, events unlimited

NETWORK

- Supports TCP/IP, DHCP, PPPoE, DDNS protocol
- Supports NAT technology
- Supports IE browser to do remote view
- Supports QRCODE Scanning through mobile phone client
- Supports setup client connection amount
- Supports dual stream. Network stream is adjustable independently to fit the network bandwidth and environment
- Supports picture snap and color adjustment in remote live
- Supports remote time and event search, and channel playback with picture snap
- Supports remote PTZ control with preset and auto cruise
- Supports remote full menu setup, changing all the DVR parameters remotely
- Supports mobile surveillance by Mobile devices with iOS /Android OS
- Supports CMS to manage multi devices on internet

2 Hardware Installation

2.1 Install Hard Drive

Check the unit and the accessories after getting the DVR. Please don't power up the unit till the physical installation is complete.

Notice: *1. This series support one SATA hard drive. Please use the hard drive the manufacturers recommend specially for security and safe field.*

2. Please calculate HDD capacity according to the recording setting. Please refer to "Appendix B Calculate Recording Capacity".

① Loosen the screws on the back and side of the device to remove the cover.

② Take out the HDD.

③ Put the HDD on the bottom of the device.

④ Turn over the device and fix the HDD with the screws.

⑤ Connect the power and data cables.

⑥ Install the cover back and fix it with the screws.

2.2 Front Panel Descriptions

The front panel descriptions are only for reference; please make the object as the standard.

Notice: *The front panel descriptions are only for reference; please make the object as the standard.*

Mini Metal Case (MM)

Item	Type	Name	Description
1	Work state indicator	Power	Power indicator, when connection , the light is blue
		Net	When access to network , the light is blue
		REC	When recording, the light is blue
2	Compound button	Fn	Change the display output type (Long Press)
3	IR receiver	IR	For remote controller
4	USB	USB port	external USB devices (USB flash, USB HDD for backup, update firmware, USB mouse)

Small 1U Case

Front panel description:

Item	Type	Name	Description
1	Work state indicator	Power	Power indicator, when connection , the light is blue
		HDD	When HDD is writing and reading , the light is blue
		Net	When access to network , the light is blue
		Backup	When backup files and data, the light is blue
		Play	When playing video, the light is blue
		REC	When recording, the light is blue
2	Compound button	MENU/+	1. Enter menu in live 2. Increase the value in setup
		BACKUP/-	1. Decrease the value in setup 2. Enter backup mode in live
		RECORD/FOCUS	1. Record manually 2. FOCUS function enables at PTZ mode.
		REW/SPEED	1. Rewind key 2. SPEED function enables at PTZ mode

Item	Type	Name	Description
		SEARCH/ZOOM	1. Enter search mode 2.ZOOM function enables at PTZ mode.
		PLAY /IRIS	1. Enter play interface 2. IRIS function enables at PTZ mode
		FF/ P.T.Z.	1. Fast forward 2. Enter PTZ mode in live
		STOP/ESC	1. Quit play mode 2. Exit the current interface or status
3	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like1/4/9 channel
		Enter button	Confirm selection
4	IR receiver	IR	For remote controller
5	USB	USB port	external USB devices (USB flash, USB HDD for backup, update firmware, USB mouse)
6	External IR	EXT_IR	Extension for the IR receiver

1U Case

Item	Type	Name	Description
1	Work state indicator	Power	Power indicator, when connection , the light is blue
		HDD	When HDD is writing and reading , the light is blue
		Net	When access to network , the light is blue
		Backup	When backup files and data, the light is blue
		Play	When playing video, the light is blue
		REC	When recording, the light is blue
2	Compound button	MENU/+	1. Enter menu in live 2. Increase the value in setup
		BACKUP/-	1. Decrease the value in setup 2. Enter backup mode in live
		RECORD/FOCUS	1. Record manually 2. FOCUS function enables at PTZ mode.
		REW/SPEED	1. Rewind key 2. SPEED function enables at PTZ mode
		SEARCH/ZOOM	1. Enter search mode 2.ZOOM function enables at PTZ mode.
		PLAY /IRIS	1. Enter play interface 2. IRIS function enables at PTZ mode
		FF/ P.T.Z.	1. Fast forward 2. Enter PTZ mode in live
		STOP/ESC	1. Quit play mode 2. Exit the current interface or status
3	Digital Input	1-10	1. Input number 1-9 or choose camera / Input number0, 10 and the above number together with other digital keys
4	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like1/4/9 channel
		Enter button	Confirm selection
5	IR receiver	IR	For remote controller
6	USB	USB port	external USB devices (USB flash, USB HDD for backup, update firmware, USB mouse)
7	External IR	EXT_IR	Extension for the IR receiver

Item	Name	F	
1	Power Button	Soft switch off to stop firmware running. Do it before power off.	
2	DVD button	Press this button, user can place the DVD to do backup.	
3	Keys 0-9	Input number 1-9 or choose camera	
4	(0/—)	1. Represents channel number. 2. Indicates digital number 0	
5	Audio/+	1. Control voice 2. Increase the value in setup	
6	P.T.Z./ -	1. Enter PTZ mode in live 2. Decrease the value in setup	
7	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like1/4/9/16 channel
		Enter button	Confirm selection
8	Work state indicator	REC	When recording, the light is blue
		HDD	When HDD is writing and reading , the light is blue
		Backup	When backup files and data, the light is blue
		Net	When access to network , the light is blue
		Play	When playing video, the light is blue
		Power	Power indicator, when connection , the light is blue
9	Function button	MENU	Enter menu in live
		INFO	Check data, same as: Main menu=>Information
		BACKUP	Enter backup mode in live
		SEARCH	Enter search mode
		REW	Rewind
		FF	Fast forward
		REC	Record manually
		PLAY	Play/Pause
		STOP	Stop/Esc
10	Jog	Control rewind/fast forward/frame when playing the image.	
11	USB	external USB devices (USB flash, USB HDD for backup, update firmware, USB mouse)	
12	IR receiver	IR	Remote controller receiver
13	External IR	EXT_IR	Extension for the IR receiver

2.3 Remote Controller

It uses two AAA size batteries.

① Open the battery cover of the remote controller.

② Place batteries. Please take care the polarity (+ and -).

③ Replace the battery cover.

The interface of remote controller is shown below.

Button	Function
REC	Record manually.
Search	To enter search mode.
MEUN	To enter menu.
Exit	To exit the current interface.
ENTER	To confirm the choice or setup.
Direction button	To move cursor in setup.
ZOOM	To zoom in.
PIP	To set picture in picture.
▶II ▶▶I ▶▶ ■ I◀◀ ◀◀	To control playback. Play/Pause/Stop/Previous Section/Next Section/Rewind/Fast Forward.
Multi	To choose multi screen display mode.
Next	To switch between single picture and picture group.
SEQ	To enter auto dwell mode.
INFO	Get information about DVR like firmware version, HDD information.

2.4 Control with Mouse

2.4.1 Connect Mouse

It supports USB mouse through the ports on the rear panel.

If mouse is not detected or doesn't work, check below steps:

1. Make sure the mouse is plugged in the USB mouse port.
2. Try with a good know mouse.

2.4.2 Use Mouse

During live:

Double-click on any camera window to see the full screen. Double-click again to return to the previous screen.

Right click to reveal the control menu on the screen. Right click again to hide the menu.

In Configuration:

Click to enter a particular option. Right click to cancel the option or to return to the previous menu.

In order to input a value in a particular screen, move cursor to the input box and click. An input window will appear as below. It supports digits, alphabets and symbols input. Click "Shift" button to input capital letters and symbols; click "Shift" button again to return.

It supports mouse drag. Take setting up motion detection area for example: Click customized, hold down the left button and drag to set motion detection area.

In Playback:
Click to choose the options. Right click to return to live mode.

In Backup:
Click to choose the options. Right click to return to previous picture.

In PTZ Control:
Click left button to choose the buttons to control the PTZ. Click right button to return to live.

***Note**: Mouse is the default tool for all operations unless an exception, as indicated.*

3 Basic Function Instruction

3.1 Power On/Off

Before you power on the unit, please make sure all the connection is good.

3.1.1 Power On

① Connect with the power.
② The device will boot and the power LED would turn blue.
③ A WIZARD window will pop up and show some information about time zone, time setup, network configuration, record configuration and disk management. User can set up here and refer to the concrete setup steps from the corresponding chapters. If users don't want to set up Wizard, please click Exit button to exit. Press and hold FN/ESC key to switch the resolution of VGA and HDMI output.

3.1.2 Power Off

You can power off the device by using remote controller, keyboard or mouse.

① Go to Main Menu and then select “Shut Down” icon to pop up the Shut down window.

② Click OK. Then the unit will power off after a while.

③ Disconnect the power.

3.2 Login

User can login or log off the DVR system. Once logged off the user cannot do any other operation except changing the multi-screen display.

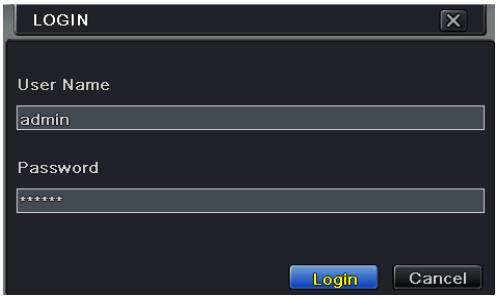


Fig 3-1 Login

*Notice: The default user name is **admin** and the default password is **123456**.*
For complete operational steps for changing password, adding or deleting users, please refer to section 4.7 User Management Configuration.

3.3 Live Preview

Fig 3-2 Live Preview Interface

Symbol	Meaning
Green	Manual record
Yellow	Motion detection record
Blue	Schedule record

3.4 Live Playback

Click Playback button to playback the record. Refer to Fig 3-3. User can do complete operation by clicking the buttons on screen.

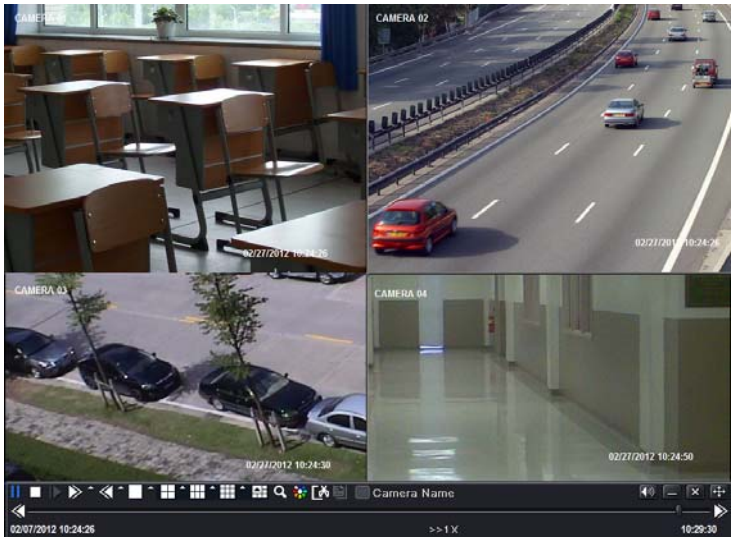


Fig 3-3 Live Playback

4 Adding IP Cameras (Applicable only for Hybrid Models)

This chapter mainly introduces how to connect multiple IP cameras through NVR. Once you finish adding IP cameras, you can see the live images through the monitor of the NVR.

To add IP cameras via LAN:

Step 1: Please enter Menu→IP Camera tab. Refer to Fig 4-1. Click "Search" button to search the devices in the same network.

Fig 4-1 Device Management

Step 2: Enter into the search tab. Click "Refresh" to refresh the searched devices. You can modify the IP address of the searched device by checking the device and clicking "Setup" button.

Fig 4-2 Search Devices

***Note**: If the network of IP cameras and NVR are in LAN, their IP address must be in the same network segment. For example: If the IP address of NVR is 192.168.013.057, the IP address of IP camera must be 192.168.013.XXX.*

Step 3: Choose the searched devices and click "OK" button to add these devices. The added cameras will be listed in the device management interface.

Step 4: Choose the camera device and click "Setup" button to enable the camera. Refer to Fig 4-3. Check the "enable" checkbox, select channel and input the username and password of this device. Then click "OK" to save settings.

Fig 4-3 Add Device

To add IP cameras via WAN:

Step 1: Please enter Menu→IP Camera tab. Refer to Fig 4-1.

Step 2: Click "Add" button to pop up a window similar to Fig 4-3. You need to check "Enable" box, select channel, manufacturer and product model and manually input IP address, server port, username and password of this device.

Note: If the NVR and the IP cameras you want to add are both in WAN, the IP address of the IP camera input here must be WAN IP. You should forward the LAN IP address and port of the IP camera in the router and use its WAN IP address, provided that the IP camera is in local area network, otherwise, the NVR cannot connect this IP camera.

5 Main Menu Setup Guide

Click right mouse or press FN/ESC button on the front panel and then the control bar will display at the bottom of the screen. Refer to Fig 4-1.

Fig 4-1 Main Menu Toolbar

Screen Mode: Click to select screen mode. Click the icon beside the screen display mode to select channels. Images can drag to any place to display in the live interface.

Dwell: Dwell means to display live images from different cameras in a sequence. The images may be displayed as a single channel or in a grid fashion from different cameras. Dwell mode is enabled only when the chosen display mode is not able to display all the available cameras.

Color: If this button is enabled, you can adjust the color of live pictures.

E-Zoom: Single channel large screen electronic amplification.

Audio: Enable sound.
PTZ: Click the PTZ button to control rotation position, speed and auto scan of the PTZ.
Snap: Click this button to snap the live pictures. These pictures will automatically be saved in the SATA disk.
Record: Click this button to start/stop recording.
Playback: Click this button to playback the record files. Click the icon beside the playback icon to select playback time. For example, if 2 minutes is selected and then click playback button, it will start to play from 2 minutes ago.
User can click button and drag it anywhere with the left mouse.
Click Menu button to pop up a window as Fig 4-2. You can also press MENU button on the front panel or operate with remote controller to display the main menu. Clicking Setup icon will pop-up the configuration menu:

Fig 4-2 Setup

*Notice: IP Camera setup is available only in version 3.4.3 and higher and not supported by SA-4100AHD-1 (MM)

5.1 Basic Configuration

Basic configuration includes three sub menus: system, date & time and DST.

5.1.1 System

Go to Main Menu→Setup→Basic→System interface. Refer to Fig 4-3.

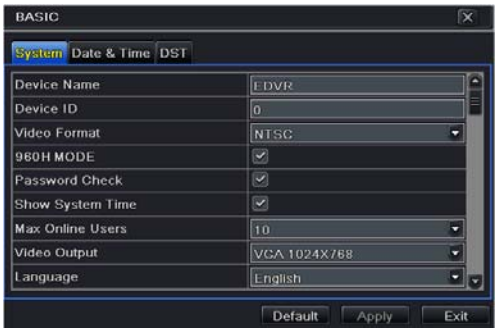


Fig 4-3 Basic Configuration-System

In this interface you can set up the device name, device ID, video format, max network users, VGA resolution, language and so on. The definitions for every parameters display as below:

Device Name: The name of the device. It may display on the client end or CMS that help user to recognize the device remotely.

Device ID: This ID is used to map the speed dome cameras.

Video Format: Two modes: PAL and NTSC. User can select the video format according to that of camera.

Password Check: If this option is enabled, the user would need to input the user name and the password for performing corresponding operations.

Show System Time: If selected, the current time will be displayed during live monitoring.

Max Online Users: To set the max number of concurrent user logins in the DVR.

Video Output: The resolution of live display interface.

Language: Set up the menu language.

> ***Note**: After changing the language and video output, the device needs to login again.*

Logout After (Minutes): A user can set up the screen interval time (30s, 60s, 180s, 300s). If there is no any operation within the setting period, the device will auto logout and return to login interface.

Show Wizard: If selected, the GUI would launch the startup wizard on every boot, allowing the user to do basic setup.

No Image When Logout: If selected, there will be no image showing when logging out.

5.1.2 Date & Time

① Go to Main Menu→Setup→Basic→Date & Time interface. Refer to Fig 4-4.

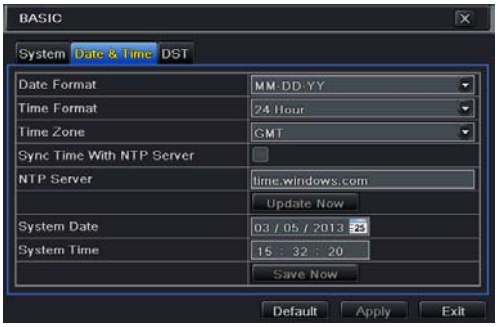


Fig 4-4 Basic Configuration-Date & Time

② Set the date format, time format, time zone in this interface; checkmark "Sync Time With NTP Server" to refresh NTP server date. You can also adjust system date manually.

③ Click "Apply" button to save the setting.

5.1.3 DST

① Go to Main Menu→Setup→Basic→DST interface. Refer to Fig 4-5.

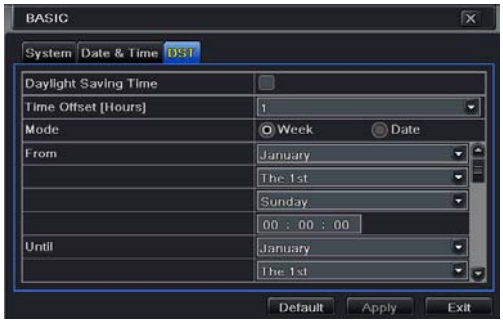


Fig 4-5 Basic Configuration-DST

② In this interface, enable daylight saving time, time offset, mode, start & end month/week/date, etc.

③ Click "Apply" button to save the setting.

5.2 Live Configuration

Live configuration includes three submenus: live, main monitor and mask.

5.2.1 Live

In this interface, you can set up camera name and adjust colors.

To set up camera name:

① Go to Main Menu→Setup→Live. Refer to Fig 4-6.

Fig 4-6 Live Configuration-Live

② A software keyboard will pop up by clicking camera name area. Click the letters and (or) digital numbers on the keyboard to input the name you want to display in live image.

③ Checkmark the camera name in the show name area.

④ All channels will show the camera name by checking "All" checkbox.

⑤ Click "Apply" to save the setting.

To set up color:

① Click "Setting" button for a particular camera/channel to see a window as Fig 4-7.

② In this interface, you can adjust brightness, hue, saturation and contrast in live. Click "OK" button to save the setting.

Fig 4-7 Live-Color Adjustment

5.2.2 Main Monitor

The main monitor settings allow you to set camera sequence in live display mode.
Operate the following steps to set main monitor:

① Go to Main Menu→Setup→Live→Main Monitor interface. Refer to Fig 4-8.

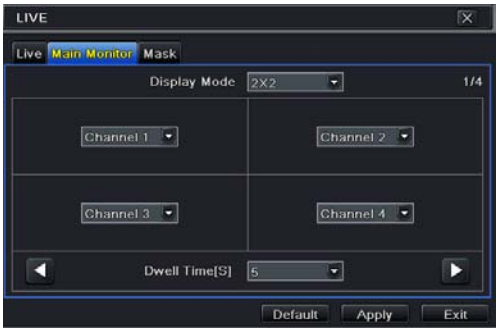


Fig 4-8 Live Configuration-Main Monitor

② Select display mode and channel.

③ Select dwell time. Click button to set up the previous channel groups of dwell picture. Click button to set the latter channel groups of dwell picture.

④ Click “Apply” to save the setting.

5.2.3 Mask

If there is something you don’t want to display in the live image. You can set mask. For a given channel a maximum of three areas can be masked.

To set up mask area:

① Go to Main Menu→Setup→Live→Mask interface.

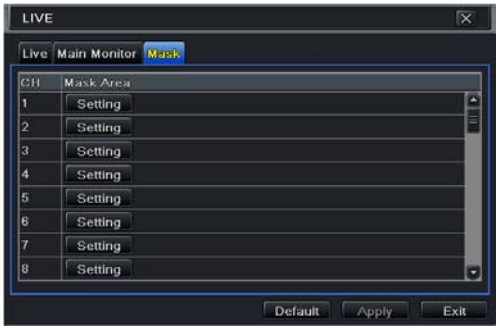


Fig 4-9 Live Configuration-Mask

② Click "Setting" button to go to live image.

③ Press and drag the left mouse button to set mask area as shown below.

④ Right click to exit the mask setting interface.

⑤ Click "Apply" button to save the setting.

To delete mask area:

① Click "Setting" button in the mask interface.

② Select a certain masked area and double click to delete that masked area.

③ Then click "Apply" button to save the setting.

Fig 4-10 Setting Mask Area

5.3 Record Configuration

Record configuration includes six sub menus: enable, record bit rate, time, recycle record, stamp and snap.

Before Configuration, please make sure your DVR has been installed with HDD and has completed its initialization.

5.3.1 Enable

① Go to Main Menu→Setup→Record→Enable interface. Refer to Fig 4-11.

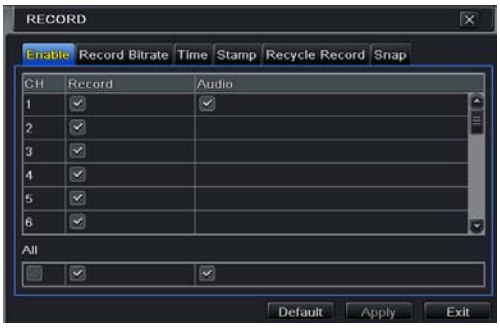


Fig 4-11 Record Configuration-Enable

Parameter	Meaning
Record	To enable/disable recording for the channel
Audio	To enable/disable audio recording for the channel

② Checkmark record and audio.

③ Select All to set up the same settings for all channels.

5.3.2 Record Bitrate

① Go to Main Menu→Setup→Record→Record Bitrate. Refer to Fig 4-12.

Fig 4-12 Record Configuration-Record Bitrate

② Set up rate, resolution, quality, encode and max bit stream.

③ Select “All” to set the same settings for all channels.

④ Click “Apply” button to save the setting.

Parameter	Meaning
Rate	720P: 1-15（NTSC）/1-12(PAL); 960H: 1-30（NTSC）/1-25(PAL).
Resolution	This series supports 720P, 960H.
Quality	The higher the value is, the clearer the recorded image is. Six options: lowest, lower, low, medium, higher and highest.
Encode	VBR and CBR.
Max bit stream	You shall adjust it subject to the actual network condition.

5.3.3 Time

① Go to Main Menu→Setup→Record→Time interface to set recording time. Refer to Fig 4-13.

② Set Pre-alarm record time and post-alarm record time. Select "All" to set the same settings for all channels.

Pre-alarm Record Time: Set the time in seconds to pre-record before the actual recording begins.

Post-alarm Record Time: Set the time in seconds to post-record after the actual recording has finished, five options: 10s, 15s, 20s, 30s, 60s, 120s, 180s and 300s.

Expire Time: Set the expiration time for recorded video. If the set date is overdue, the recorded files will be deleted automatically.

③ Click "Apply" to save the setting.

Fig 4-13 Record Configuration-Time

5.3.4 Stamp

This provides an option to enable or disable the Camera Name and the Time stamp on the video. The user can also choose a position for the stamp on the screen.

To set up stamp as follows:

① Go to Main Menu→Setup→Record→Stamp interface. Refer to Fig 4-14.

Fig 4-14 Record Configuration-Stamp

② Checkmark camera name and time stamp. Click Setting button to set up the position of the stamp. You can drag the camera name and time stamp at random positions. Refer to below Figures.

③ Select “All” to set up all channels with the same parameters.

Before drag

After drag

5.3.5 Recycle Record

This option is used to recycle the HDD space once it is full. If enabled, the system will automatically delete the old records and recycle the space if it is completely utilized. The setting steps are as follows:

① Go to Main Menu→Setup→Record→Recycle Record interface.

② Checkmark recycle record to activate auto recycling. If the option is disabled or not selected, the DVR would stop recording once HDD is full.

③ Click “Apply” button to save the setting.

5.3.6 Snap

In this interface, user can set up resolution, quality, snap interval, snap number.

5.4 Schedule Configuration

Schedule configuration includes two sub menus: schedule and motion.

5.4.1 Schedule

This tab allows defining schedule for normal recording for seven days of a week, 24 hours of a day. Every row denotes an hourly timeline for a day. Click the grid to do relevant setup. A highlighted area denotes selected timeline. Operate the following steps to set schedule:

① Go to Main Menu→Setup→Schedule interface. Refer to Fig 4-15.

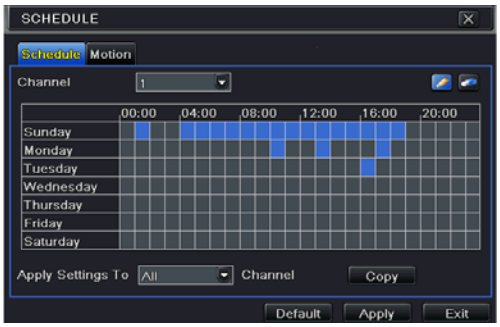


Fig 4-15 Schedule Configuration-Schedule

② Select channel and click "" button to add a certain day schedule. Click "" button to delete the selected schedule.

If you want to apply the schedule setting of a certain channel to other or all channels, you need to select channel and click "Copy" button.

You can also set week schedule by double-clicking in the gridding area. This will take you to see a dialog box as Fig 4-16.

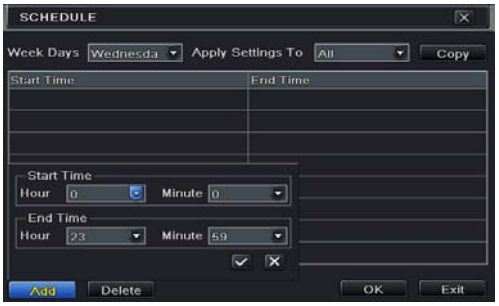


Fig 4-16 Schedule-Week Schedule

① Select a day and click "Add" to set start time and end time. Then click to save.

② Select other days and add schedule or copy settings from one schedule to the others under the Apply Settings To item.

5.4.2 Motion Schedule

This tab allows to set schedule for motion based recording. The setting steps are as follows:

① Go to Main Menu→Setup→Schedule→Motion tab.

② The setup steps for schedule for motion based recording are similar to normal schedule setup. You can refer to 4.4.1 Schedule for details.

Note: *The default schedule of motion based recording is 24 x 7. If you want to activate motion based recording, you must enable motion alarm and set up schedule for motion alarm (see Chapter 4.5.1 Motion Alarm for more details).*

5.5 Alarm Configuration

Alarm configuration includes four sub menus: motion, video loss, other alarm and alarm out.

5.5.1 Motion Alarm

Motion includes two sub menus: motion and schedule. The steps to set motion alarm are as follows:

① Go to Main Menu→Setup→Alarm→Motion. Refer to Fig 4-17.

Fig 4-17 Alarm Configuration-Motion

② Enable motion alarm, set alarm hold time which refers to the time till which the system will wait for further detection of motion. e.g. If the holding time is set to 10 seconds, once the system detects a motion, it will go to alarm but would not detect any other motion alarm (specific to channel) until 10 seconds. If there is other motion detected during this period it is considered it as continuous movement, otherwise it will be considered as a single motion.

③ Click “Setting” button under the Trigger area. Then a window will pop up as below:

Fig 4-18 Alarm Configuration-Motion Trigger

Buzzer: If selected, the local buzzer would be activated on an alarm.
Show Full Screen: If selected, there will pop up the chosen channel on the monitor on an alarm trigger.
Email: If selected, the DVR will send an email alert to the preconfigured email address in case of a motion based alarm from the particular input.
Snap: If selected, the system will snap images of the checked channels on an alarm and save them in the HDD automatically.

④ Go to To Record tab. Select recording channels. It would be recorded in case of an alarm. Click OK button to save the setting.

⑤ Go to "To PTZ" tab. Set preset, cruise and track options for a PTZ in case of a sensor based alarm. Single or multiple PTZ units could be programmed to perform this function on the same alarm.

⑥ After clicking Area button, a dialog box will pop up as Fig 4-19.

Fig 4-19 Motion-Area

⑦ In the Area interface, you can drag slide bar to set the sensitivity value (1-8). The higher the value is the more sensitive it is to motion. Since the sensitivity is influenced by color

and time (day or night), you can adjust its value according to the practical conditions. Left click the grid and drag to delete area. Click icon to set the whole area as detection area. Click icon to clear the set detection area. Click icon to test the sensitivity as per the local conditions. Once motion is sensed, it displays a figure icon. Click icon, to save the setting. Click icon to exit the current interface.

Note: *Prior to setting motion detection field it is recommended that you click icon to clear the existing field and set afresh.*

⑧ Select "All" to set the same settings for all channels.

⑨ Click "Apply" button to save the setting.

⑩ Go to Schedule tab. The setting steps for schedule for motion based alarm are similar to normal schedule setup (see Chapter 4.4.1 for more details).

5.5.2 Video Loss

This DVR can be set up to detect video loss. The setting steps are as follows:

① Go to Main Menu→Setup→Alarm →Video Loss. Refer to Fig 4-20.

② The setup steps of video loss trigger are similar to motion trigger setting. (See Chapter 4.5.1 Motion→Trigger setting for more details).

Fig 4-20 Alarm Configuration-Video Loss

5.5.3 Other Alarm

This tab gives a choice to configure alarm for Disk Full, IP Conflict, the Disconnect event, Disk Attenuation or Disk Lost.

① Go to Main Menu→Setup→Alarm→Other Alarm. Refer to Fig 4-21.

② Use the dropdown menu and select the event or the alarm.

③ Check the required trigger options.

④ If the selected event is "Disk Full", then use the drop down box for "Disk Shortage Alarm" to choose a threshold value for remaining HDD space. If the threshold value is reached,

the system will trigger the Disk Full Alarm.

⑤ Click “Apply” to save the setting.

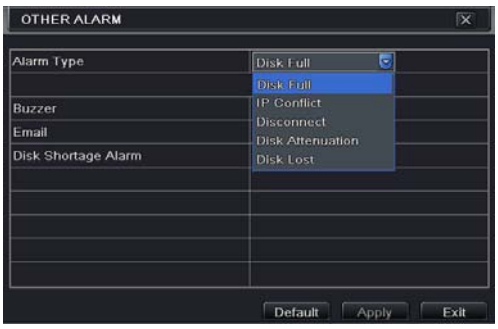


Fig 4-21 Other Alarm

5.5.4 Alarm Out

To set up alarm out:

① Go to Main Menu→Setup→Alarm→Alarm Out. Refer to Fig 4-22.

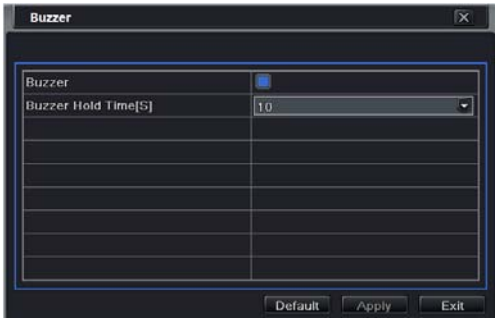


Fig 4-22 Alarm Out

② Checkmark Buzzer and set buzzer alarm hold time. This would trigger the buzzer when the system is on an alarm.

5.6 Network Configuration

Network configuration includes Network, Sub Stream, Email, Server, NAT and Other Settings. Network settings must be configured if DVR is used for monitoring over network.

5.6.1 Network

To set up network:

① Go to Main Menu→Setup→Network tab. Refer to Fig 4-23.

② Set HTTP port. The default HTTP port is 80. If the value is changed, you shall add the port number when typing IP address in IE address blank. e.g. If HTTP port is set to 82 and IP address is http://192.168.0.25, you should input the following IP address: http://192.168.0.25:82 into IE browser.

③ Set server port. The default server port is 6036.

④ Connect internet. There are three ways to connect internet.

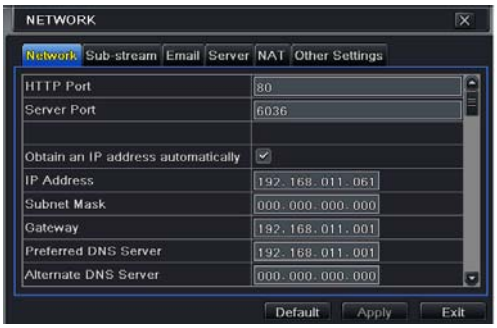


Fig 4-23 Network Configuration-Network

- If you have a DHCP server running and would like your DVR to automatically obtain an IP address and other network settings, check the checkbox beside "Obtain an IP address automatically". Then the device will distribute IP address, subnet mask, and gateway IP and DNS server.
- If you want to configure your own settings, disable "Obtain an IP address automatically" item and input the IP address, subnet mask, gateway IP and DNS server.
- If you connect internet through PPPoE, disable "Obtain an IP address automatically" item and check PPPoE checkbox and then enter username and password. Once the setup is completed, your DVR will automatically dial up into your network.

⑤ Test the effectiveness of the network by clicking "Test" button.

⑥ If the network is well connected, please click "Apply" button to save the setting.

5.6.2 Sub Stream

To set up sub stream:

① Go to Main Menu→Setup→Network →Sub Stream interface. Refer to Fig 4-24.

② Select fps, resolution, quality, encode and max bit rate.

③ Select "All" to set the same settings for all channels.

Fig 4-24 Network Configuration-Sub Stream

Parameter	Meaning
FPS	1-12/15. Can be higher in some models
Resolution	Support CIF.
Quality	The quality of the clients' image. The higher the value is, the clearer the record image. Six options: lowest, lower, low, medium, higher and highest.
Encode	VBR and CBR.
Max bit rate	Range from: 256~1792kbps.

5.6.3 Email

To set up Email:

① Go to Main Menu→Setup→Network→Email interface. Refer to Fig 4-25.

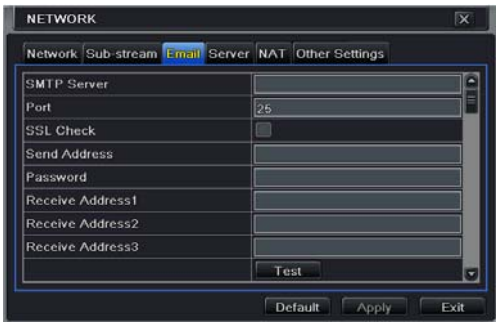


Fig 4-25 Network Configuration-Email

② Set SMTP Server and port.
SMTP Server/Port: The name and port number of SMTP server. You can set up SSL check (such as Gmail) according to actual needs.

③ Set sender's address and password.

④ Set receiver's email address and click "Test" button to test the validity of the mailbox.

Attaching image: If selected, the system will attach images when sending emails.

5.6.4 Server

This function is mainly used for connecting ECMS/NVMS. The setting steps are as follows:

① In the server interface, select "Enable" as shown in the Fig 4-26.

② Check the IP address and port of the transfer media server in the ECMS/NVMS. The default server port for auto report is 2009. If it is modified, please go to the transfer media interface to check.

Fig 4-26 Network Configuration-Server

③ Enable the auto report in the ECMS/NVMS when adding a new device. Then input the remaining information of the device in the ECMS/NVMS and self-define a device ID.

④ Input the above-mentioned server IP, server port and device ID in the server interface. Then click "Apply" button to save the setting. Now, the ECMS/NVMS system will automatically connect this device.

5.6.5 NAT

① Go to Main Menu→Setup→Network→NAT interface. Refer to Fig 4-27.

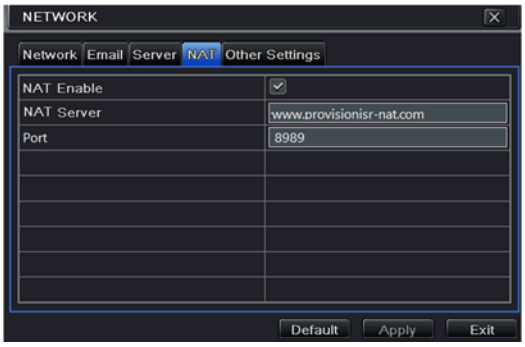


Fig 4-27 Network Configuration-NAT

② Enable NAT and input the NAT Server (The default NAT Server is *www.provisionisr-nat.com* and the default port is ***8989***).

③ Click "Apply" to save the settings.

5.6.6 Other Settings

If your DVR is set to use PPPoE as its default network connection, you may set up DDNS to be used in connection. The setting steps are as follows:

① Enable and select DDNS server.

② Enter user name, password and host domain name of the registered website.

③ Click "Test" button to test the effectiveness of the relevant information.

④ Click "Apply" button to save the setting.

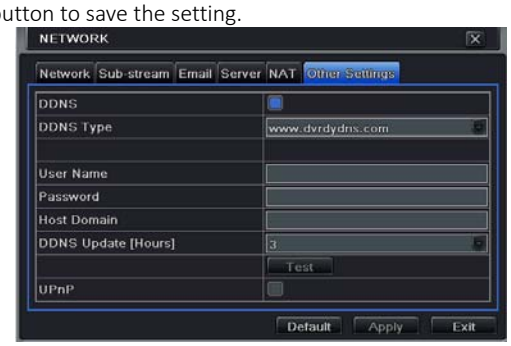


Fig 4-28 Network Configuration-Other Settings

Enable UPnP: Select UPnP here and then enable UPnP function in your router. Therefore, there is no need for you to forward LAN IP address and port in the router in connection of internet. After that, you can check the WAN IP address in the router.

> ***Note:*** *The domain name selected by user is a banding domain name of DVR. User should logon the website provided by the server supplier to register a user name and password and then apply for a domain name online. After the successful application, user can access the device from the IE client by inputting that domain name.*

1． Domain name Registration （http://provision-isr-dns.com）

Note: DDNS is used to register for a hostname with DDNS username and password.

Provision ISR now allows you to use our mint DDNS server in order to create a virtual address for your DVR on the internet. Each account can create up to 35 different addresses using your preferred domain name address instead of using IP addresses. Follow the steps below to register your DVR's name and to configure your DVR to use Provision ISR's Mint DDNS server.

(a) To register a domain with Provision-ISR DDNS server follow these steps:

1) Visit our website: **http://provision-isr-dns.com** and register for a domain name by clicking "**Registration**"

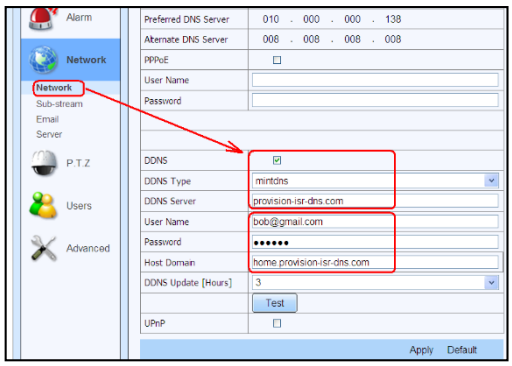
2) Fill in the registration form, then click "Submit"

3) Fill in the host name you want to apply for and press "Request Domain" (for example "home")

4) If there is no problem with the domain registration you will see the following message: "Your domain was successfully created."

If you do not see this message, the domain name you requested is already in use and you will be requested to provide an alternate domain name (please note: *domain name* is sometimes called *host name*).

You can create up to 35 domain records under a single account



5) The domain name is added at the beginning of your DVR's address, for example the domain "*home*" will appear as home.provision-isr-dns.com.

(b) Setting up your DVR to work with the DDNS server

1) The DDNS server will work only if the three steps are completed; (1) domain registration, (2) correct network configuration with correct preferred/alternate DNS servers, and (3) correct port forwarding configurations are set on the local network (your router).
2) On the DVR Under Main menu => Settings => “Config” => “Network” set the correct DNS servers;

For example take a look at the correct settings on the figure below; the router's IP address is 10.0.0.138, the e-mail account registered is bob@gmail.com, and the host domain registered is "home.provision-isr-dns.com".

3) As shown on figure above: Check the “DDNS” check box, select “mintdns” for DDNS type, and fill in all the other fields.
4) Make sure you have the preferred & alternate DNS servers filled in (under the “Network” settings section): the preferred server should be the Internet gateway and the alternate server should be a different DNS server– for example one of Google's DNS servers (IP 8.8.8.8 or 8.8.4.4)
5) Click the “Test” button
    a. If the test succeeds click the “Apply” button
    b. If the test fails check all fields again or call the support helpline
6) Now you can access the DVR using the DDNS (http://home.provision-isr-dns.com)

5.7 User Management Configuration

This tab allows you to add normal or advanced users. To add user and set up user authority:

① Go to Main Menu→Setup→Users. Refer to Fig 4-29.

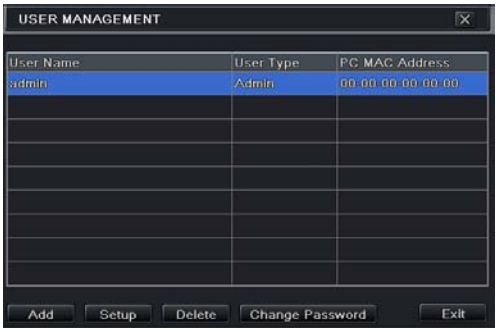


Fig 4-29 User Management Configuration

② Click Add button to display a dialog box as Fig 4-30.

Fig 4-30 Add-General

③ In General tab, input username, password and select user type. You can also check "Binding PC MAC Address" and input this address.

④ Click "OK" to save the setting.

Note: *When the default value of binding PC MAC Address is 0, the user is not bound with the specified computer. If the bind option is used, the user would be able to log into the DVR only through the specific computer (carrying the MAC address).*

---

⑤ Select Authority tab and assign the operation rights for particular user. Refer to Fig 4-31.

⑥ Click OK to save the setting.

Fig 4-31 Add User-Authority

To delete user:

① Go to Main Menu→Setup→Users interface.

② Select the added user you want to delete and then click “Delete” button.

To modify user:

① Go to Main Menu→Setup→Users interface.

② Select the added user you want to modify and then click “Modify” button to do the relevant operation.

To change user password:

① Go to Main Menu→Setup→Users interface.

② Select the added user you want to change its password and then click “Change Password” button.

5.8 P.T.Z Configuration

P.T.Z configuration includes two submenus: serial port and advanced.
Serial port settings are as follows:

① Go to Main Menu→Setup→P.T.Z→Serial Port interface. Refer to Fig 4-32.

Fig 4-32 P.T.Z Configuration-Serial Port

Parameter	Meaning
Address	The address of the PTZ device.
Baud rate	Baud rate of the PTZ device. Range form: 110, 300, 600, 1200, 2400, 4800, 9600, 19200, 34800, 57600, 115200, 230400, 460800, 921600.
Protocol	Communication protocol of the PTZ device. Range from: NULL, PELCOP, PELCOD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA, SAMSUNG, RM110, HY, N-control.
Simulative Cruise	If enabled, no matter whether the PTZ device supports cruise or not, the presets will cruise.

② Select “Enable” and set up the value of address, baud rate and protocol according to the settings of the speed dome.

③ Select “All” to set the same settings for all channels.

Advanced settings include preset setting, cruise setting and track setting.
Go to Main Menu→Setup→P.T.Z→Advanced. Refer to Fig 4-33.

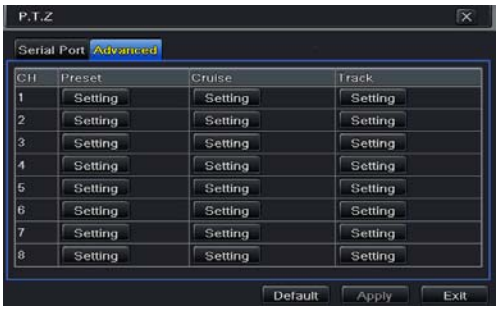


Fig 4-33 P.T.Z configuration-advanced

To set up preset:

① In the Advanced interface, click preset “Setting” button to see a dialog box as Fig 4-34.

Fig 4-34 Advanced-Preset Setting

② In the preset setting tab, enable preset, set the preset name and then click preset "Setting" button.

Fig 4-35 Preset Setting

③ Control the dome by rotating up, up left, down, right down, left, left down, right and up right and adjust the rotate speed and the value of zoom, focus and iris of the dome.

Note: PTZ must support wiper and light button and these two buttons are just available when selecting PELCOP or PELCOD.

④ Select the serial number of the preset point. Click button to enable the PTZ wiper and click button to enable the PTZ light.

⑤ Click "Save" button to save the setting. Click icon to hide the tool bar. Right click to view this bar again. Click icon to exit the current interface.

⑥ Return to the Advanced-Preset Setting interface and click OK button to save the setting.

To set up cruise:

① In the Advanced interface, click cruise "Setting" button to see a window.

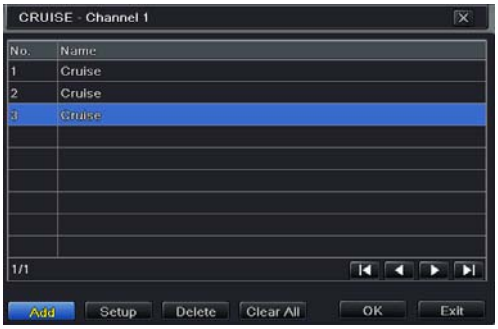
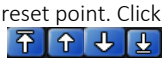


Fig 4-36 Cruise Setting

② Click Add button to add cruise line in the list box (8 cruise lines can be added at most).

③ Select a cruise line and click "Setup" button to see a dialog box as Fig 4-37.

Fig 4-37 Modifying Cruise Line

④ Click Add icon to set the speed and time of preset point. Select a preset point and then click Delete icon to delete that preset point. Click Modify icon to modify the setting of a preset point. User can click  those icons to adjust the position of preset point. Click Preview button to preview the cruise line. Click OK button to save the setting.

To set up track:

① In the Advanced interface, click track "Setting" button to see a dialog box as Fig 4-38.

② Control the dome by rotating up, up left, down, right down, left, left down, right and up right and adjust the rotate speed and the value of zoom, focus and iris of the dome.

③ Click Start Record button to record the move track of PTZ. Click this button again to stop record.

④ Click Start track button to play recorded track. Click this button again to stop playing.

⑤ Click icon to exit the current interface.

Fig 4-38 Track Setting

5.9 Advanced

Advanced configuration includes three submenus: reset, import/export and block/allow list.

5.9.1 Reset

Reset the device to factory default settings.

5.9.2 Import/Export

Export the data files into mobile storage devices for backup and then import specified data files from mobile storage device to DVR.

5.9.3 Block/Allow List

Here authorized user can prohibit computer users within a certain IP address range from accessing to DVR or allow computer users within a certain IP address range to access DVR. E.g. if an admin user doesn't want computer users within IP address range from 192.168.000.002 to 192.168.000.004 to access the DVR, he can check Block list option, and then input such IP address range. If it is required that computer users within a certain IP address range access DVR, they can check Allow List option and then do the required setting.

Fig 4-39 Block/Allow List

6 Search, Playback & Backup

Search configuration includes four submenus: time search, event search, file management and image.

6.1 Time Search

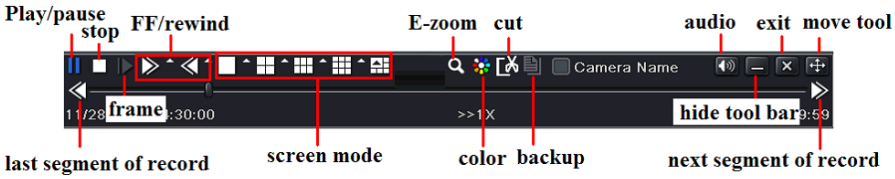
① Go to Main Menu→Search→Time Search. Refer to Fig 5-1.

Fig 5-1 Search Configuration-Time Search

② Select date and channels on the right hand side and press the "Search" button. A date with highlighted borderline indicates presence of data.

③ Set the start time by clicking a particular grid or by entering the specific value in the start time field.

④ Select the channel display mode and click Play button to play record. Use the playback toolbar to control the playback.



➢ To set backup during a certain period in the playback interface:

Select the start time by dragging the slider and click icon. Then select the end time and click this icon again to confirm the record period. Next, click icon to backup the record during this period.

6.2 Event Search

① Go to Main Menu→Search→Event Search button. Refer to Fig 5-2.

Fig 5-2 Search Configuration-Event Search

② Select date and channels on the right hand side. A data with highlighted borderline indicates presence of data.

③ Checkmark Motion or All accordingly.

④ Click Search button to display the searched event information in the event list box.

⑤ Double check a certain record file to playback.

6.3 File Management

① Go to Main Menu→Search→File Management interface. Refer to Fig 5-3.

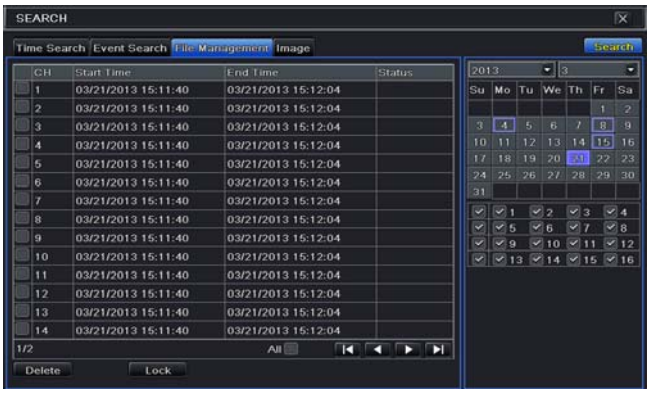


Fig 5-3 Search Configuration-File Management

② Select date and channels. The date with highlighted borderline indicates presence of data.

③ Click Search button to display the searched files in the file list box.

④ Use “All” button to lock/unlock or delete all files in the file management column.

⑤ Double click an unlocked item to play.

Lock: Select a file and click Lock button to lock this file, after that, that file will not be deleted or covered.

Unlock: Select a locked file and click “Lock” button to unlock this file.

Delete: Select an unlocked file and click “Delete” button to delete this file.

6.4 Search by Image

① Go to Main Menu → Search → Image tab.

② Select data and channels on the right hand side.

③ Press “Search” button to search for a recorded image.

④ Once an alarm image has been identified, the user can double click the image to play recording.

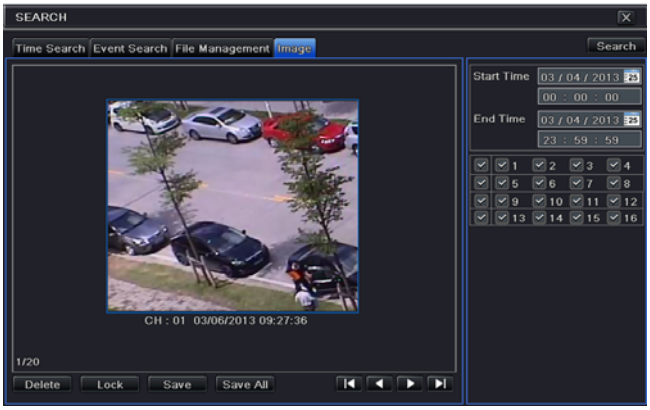


Fig 5-4 Search Configuration-Image

Lock: Select the image and click “Lock” button to lock this image.

Save: Click “Save” button to copy the image on the HDD.

Save All: Click “Save All” button to copy all images on the HDD.

6.5 Backup

This unit supports backup by USB Flash. You can also make backup by IE browser via internet (see section 7.5.2 Remote backup).

① Insert USB storage device and then go to backup configuration. Refer to Fig 5-5.

② Set the start & end time, select channels and click Search button to display the searched data in the data backup list box.

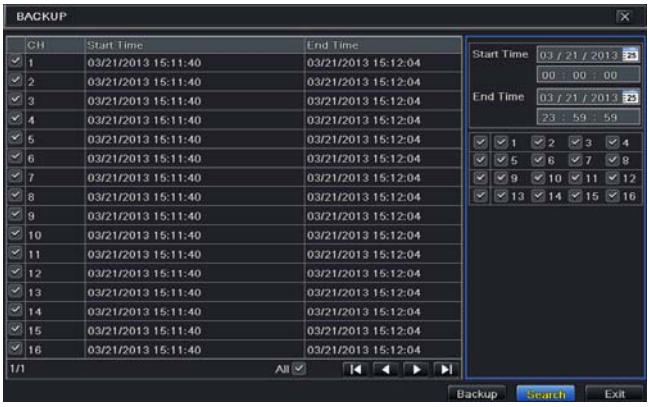
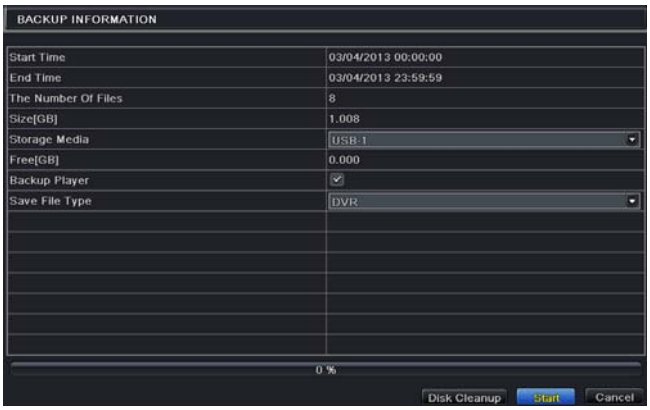


Fig 5-5 Backup Configuration

③ Select a required file or checkmark “All” to select all data files. Click Backup button to display Backup information window.



④ In the backup information interface, you can check the relevant information of backup files, storage type, save file type, etc. Then click Start button to start backup.

Note: If the backup files are saved in DVR format, please check backup player. Only this player can play these files in DVR format. If the backup files are saved in AVI format, you can play these files with common media player.

7 Manage DVR

7.1 Check System Information

Check system information includes seven submenus: system, event, log, network, online users, record and QRCODE.

7.1.1 System Information

In this interface, you can check the hardware version, MCU version, kernel version, device ID, etc.

7.1.2 Event Information

In this interface, you can search for events like motion and video loss. The utility provides an interface to have a date based and a channel based search. This report can further be saved on a USB flash drive as an html file using the export button.

7.1.3 Log Information

In this interface, you can search for relevant logs as per set date and event which includes Operation, Setup, Playback, Backup, Search, Check Information and Error. This report can further be saved on a USB flash drive as an html file using the export button.

7.1.4 Network Information

In this interface, you can check relevant parameters of network.

7.1.5 Online Information

In this interface, you can check the details of the connected online users.

Refresh: Refresh the current interface.
Disconnect: Disconnect the online users to access DVR. If this function is used by the admin, the particular PC will not be able to access the device for five minutes.

7.1.6 Record Information

In this interface, a user can check resolution, ftp and record status including motion recording, manual recording or schedule recording.

7.1.7 QRCODE

User can quickly access the mobile client by scanning QRCODE. Go to Main menu→Information→QRCODE tab.

In this interface, you can scan the QRCODE through the mobile phone. Refer to Fig 6-2:

Fig 6-2 Information Configuration-QRCODE

7.2 Disk Management

To format the disk

① Go to disk management interface. Please format the hard disk before recording.

> ***Note**: please format the hard disk before record.*

② Click Refresh button to refresh the disk information in the list box.

③ Select a hard disk and click Format button to start format.

> ***Note**: All recorded files in the hard disk will be lost after formatting.*

To check other information of disk

After you go to Disk Management→Advanced tab, you can check model, S/N, firmware, health status of the disk in this interface. You also can monitor the temperature, internal circuit, dielectric material of the disk, analysis the potential problems of the disk and warn so as to protect its data.

7.3 Upgrade

At present, it only supports USB update. Get the software from your vendor when there is a new software version. The upgrade steps are as follows:

① Copy the upgrade software which gets from vendor into the USB storage device.

② Connect the USB flash drive to the USB port.

③ Go to Main Menu→Upgrade tab. You will see the upgrade software name displaying in the upgrade list box.

④ Select that software and then click Upgrade button. The system will be upgraded automatically.

Note: *Please wait for a while when the system reboots. Any power interruption is not allowed during upgrading.*

7.4 Logoff

A log off dialogue box will pop up by clicking Log off icon. Then click OK button to confirm to log off. If you want to log in again, click Main Menu icon to enter user name and password to re-login.

8 Remote Surveillance

8.1 IE Remote Surveillance by NAT

8.1.1 NAT Settings

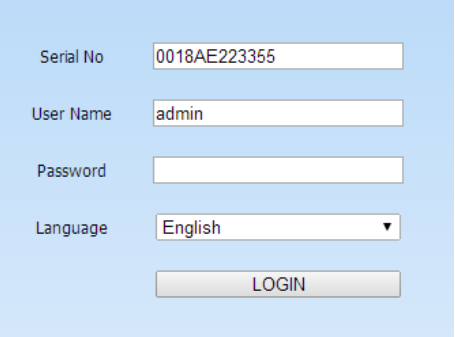
① The DVR shall be powered on and connected to the network.
② Go to Main Menu→Setup→Network→Network. You can obtain the IP address, Subnet Mask and Gateway automatically. You can also manually input them according to the actual network situation. And the IP address shall be in the same network segment as the network which is used.
③ Set the preferred or alternative DNS Server (Please refer to 4.6.1 Network for details).
④ Go to Main Menu→Setup→Network→NAT tab.
⑤ Enable NAT and input the NAT Server (The default NAT Server is *www.provisionisr-nat.com*).
⑥ Click "Apply" to save the parameters (Please refer to 4.6.5 NAT for details).

8.1.2 NAT Access

After finishing the NAT settings, you can enter the NAT Server on the PC (Input *http://www.provisionisr-cloud.com* to go to the IE client). If you are the first time to access the NAT, the network will download the ActiveX automatically.

Note: *If you cannot download and install ActiveX, please refer to FAQ Q7.*

After installing ActiveX successfully, it will pop up the login box:



Serial No: The MAC address of the DVR (Go to Main Menu→Information→QRCODE to check the number below the QR code).
User Name: The login username of DVR. The default username is ***admin***.
Password: The login password of DVR. The default password is ***123456***.

8.2 IE Remote Surveillance via LAN & WAN

In order to view the DVR from a network it may be connected to a LAN/WAN or internet. The network setup should be done accordingly. Please refer to 4.6 Network Setup.

8.2.1 Via LAN

① Go to the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc .If using DHCP, please enable DHCP in both the DVR and the router.
② Enter Record Setup to set network video parameters like resolution, frame rate etc.
③ Open IE on a computer on the same network. Input the IP address of the DVR in IE address bar and press enter.
④ IE will download ActiveX component automatically. Enter the username and password in the subsequent window

***Notice**: If HTTP port is not 80, add the port number after IP address. For example, set HTTP port as 82, input IP address like 192.168.0.25:82. User name and password here are the same with that used on the DVR. The default username and password is admin and 123456.*

8.2.2 Via WAN

There are two ways for the DVR to connect to internet.

1. Connect the DVR to internet through router or virtual server.

① Go to the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc. If using DHCP, please enable DHCP in both the DVR and router.
② Forward IP address and port number in Virtual Server setup of the router or virtual server. Configure the firewall to allow accessing the DVR (If the user has enabled the UPnP function in both the DVR and router, he can skip this step).
③ If users want to utilize dynamic domain name, please apply for a domain name in a DNS server supported by the DVR or router. Then add to the DVR or router.
④ Open IE browser, input IP address, or dynamic domain name and enter. If HTTP port is not 80, add the port number after IP address or domain name.
⑤ IE will download ActiveX automatically. Then a window pops up and asks for user name and password. Input name and password correctly, and enter to view.

***Note:** If you cannot download and install ActiveX, please refer to FAQ Q7.*

2. Connect the DVR to internet directly.

① Go to the DVR's Main Menu→Setup→Network interface to enable PPPoE and then input user name and password received from your ISP. Next, click "Apply". The DVR will connect to the server and would give a confirmation message.

② When accessing the remote interface of DVR, user can input WAN IP to access directly (user can go to Main Menu→Information→Network interface to check IP address). The browser will download Active X control.

③ The following setting steps are as the same as ④ and ⑤ in Point 1.

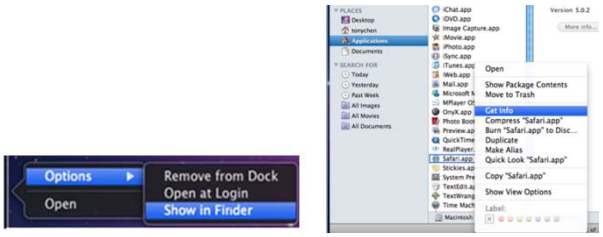
8.3 Remote Surveillance through Apple PC

Note: *Because the current plug-in version of client end just only supports 32-bit mode, so the safari browser shall start 32-bit mode. If the browser is the earlier MACOS version, the default setting is 32-bit mode and the setting can be skipped.*

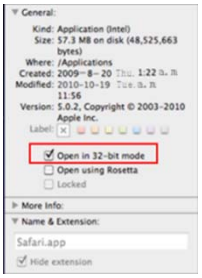
The setting steps are as follows:

① Right click safari icon and select “Show in Finder”.

② Select Applications→Right click “Safari. App”→Select “Get Info”.



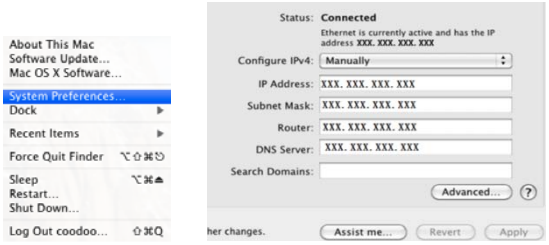
③ Select “Open in 32- bit mode”.



8.3.1 Via LAN

① After starting Apple computer, click Apple icon. The following window will pop up. Please select “System Preferences”→ “Internet &Wireless”→ “Network”.

② Go to Network interface and then click “Ethernet Connected” to check the internet connection of Apple PC.



③ After acquiring the IP address, Subnet Mask and so on, please go to the DVR's Main Menu→Setup→Network interface to manually input IP address, Subnet Mask and Gateway according to the configuration of PC. The network segment should be the same as the PC. If using DHCP, please enable DHCP in the DVR and router.

④ After the above information is completed, you can enter LAN IP and HTTP port in the Safari browser. For example: input http://192.168.1.100:81(here 192.168.1.100 is LAN IP of DVR, 81 is the HTTP port of DVR), and click " ↻ " button. Then the browser will download ActiveX control as shown below:

Web Client
http://192.168.1.100:81
please click icon to load and install WebkitPlugin:
please restart browser to ensure WebkitPlugin can take effect after install!

⑤ Click icon and then select the ActiveX control, the welcome interface will be shown. Click "Continue"→ "Install" button, the following window will pop up:

Input the name and password of Apple PC and then click "OK" to install this Active X control.

⑥ After finishing installing the ActiveX control, please quit from the Safari browser. Right click Safari icon on the desktop and then select "Quit" button to quit the browser. Then restart Safari browser. Input the IP address and HTTP port to go to the login interface of DVR.

8.3.2 Via WAN

There are also two ways for DVR to connect to Internet.

1. Connect the DVR to internet through router or virtual server.

① The network setups are the same as step one to step four of point 1 on WAN of IE remote surveillance.

② Enter WAN IP and HTTP port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.3.1.

2. Connect the DVR to internet directly.

① The network setups are the same as step one of point 2 on WAN of IE remote surveillance.

② Enter WAN IP and HTTP port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.3.1.

8.4 The Remote Live Preview

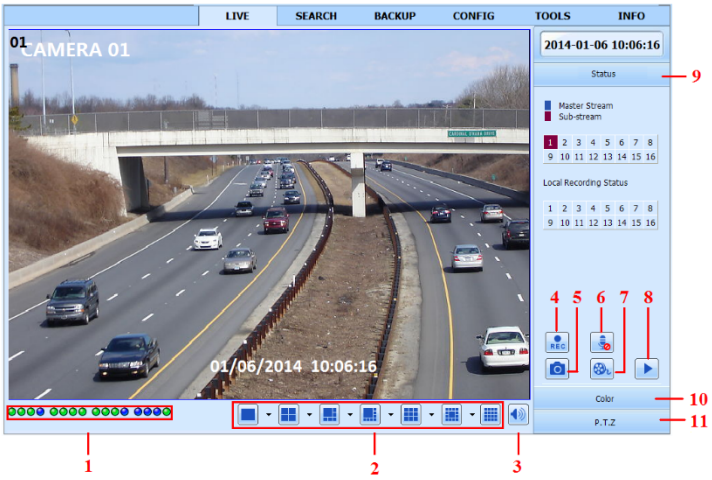


Fig 7-1 Remote Live Preview Interface

1	Channel indicator	2	Screen display mode
3	Volume	4	Start recording
5	Snapping picture	6	Bidirectional talk
7	Start IE record	8	Playback
9	Master/sub stream status	10	Color
11	PTZ control		

Note: Click REC *button to start recording. The record file will be saved in user's PC.*

Screen display mode:

Click the icon beside the screen display mode to select channels.

Snap pictures:

Click "Snap" icon to automatically capture pictures and save those pictures in the computer. You can set up the save path for those picture in the Remote Preview interface → Configuration →Local configuration.

Color adjustment:

Drag the slide bar to adjust Brightness, Contrast, Hue, and Saturation. Click Default to reset them to original value.

Buttons	Description
	Drag the scroll bar to adjust the brightness of channel
	Drag the scroll bar to adjust the contrast of channel
	Drag the scroll bar to adjust the saturation of channel
	Drag the scroll bar to adjust the hue of channel
	Click this button to recover the default value of brightness, contrast, saturation and hue.
	Save the adjustment

PTZ control:

Please connect speed dome to the device via RS485 firstly, make sure the protocol of the speed dome is supported by the device and set the relative parameters manually. User can control the dome up, down, right, left or stop rotating on Control Center, adjust rotation speed, Iris and zoom, focus on the dome, and set the presets, etc.

Buttons definition:

Buttons	Description
	to rotate the dome upwards. to rotate the dome diagonally up-left. to rotate the dome diagonally up-right to rotate the dome downwards. to rotate the dome diagonally down-right to rotate the dome diagonally down-left to rotate the dome towards left. to rotate the dome towards right to stop rotating the dome.
	Drag the scroll bar to adjust rotating speed of the dome.
	'Iris' button. Click button near 'Iris' button to increase light of the dome. Click button near 'Iris' button to decrease light of the dome.
	'Zoom' button. Click button near 'Zoom' button to zoom in the locale picture of this camera. Click button near 'Zoom' button to zoom out the locale picture of this camera.

	'Focus' button. Click button near 'Focus' button to have long focus. Click button near 'Focus' button to have short focus.
	Go to the Preset.
	Select and do auto cruise.
	Track
	Auto scan
	Wiper button
	Light button

Click the right mouse on the live interface. This will take you to a pull-down menu.

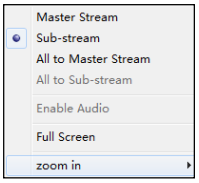


Fig 7-2 Right Key Sub Menu

Stream: This DVR supports master stream and sub stream. Master stream has higher frame rate, max 25FPS (PAL)/30 FPS (NTSC) for every channel, but it needs higher network bandwidth simultaneously. Sub stream has low frame rate, max 6FPS (PAL)/7FPS (NTSC) for every channel, it requires low network bandwidth. Therefore, you can select the stream according to your bandwidth.
All to master/sub stream: Set all channel to master stream or sub stream.
Enable audio: Enable or disenable audio.
Full screen: The live preview picture will display with full screen and the tool bar will be hid. Double click left mouse or click right mouse to return.
Zoom in: Single channel large screen electronic amplification. Click the channel which needs to be zoomed. Right click to select zoom in button to zoom in the image. Double click or right click to exit.

8.5 Remote Playback & Backup

8.5.1 Remote Playback

Click button to go to record playback interface. Refer to Fig 7-3.
Select the record date and channels and double-click the file name in the record file list box. Then you can play that file and preview the picture.

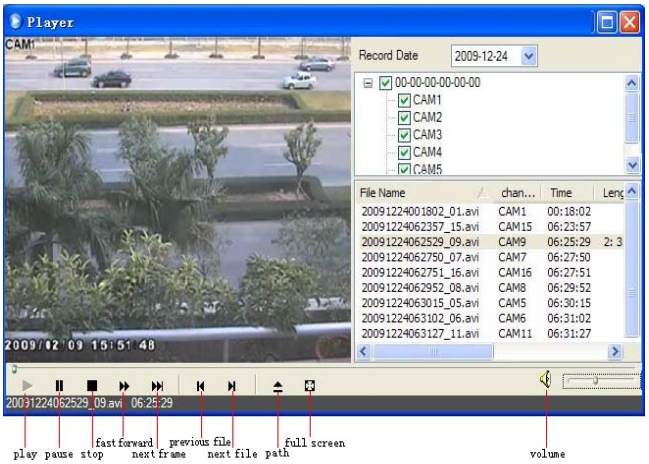


Fig 7-3 Play Record File Interface

This DVR supports remote time search, event search and file management.

By Time Search:

① Go to Search→Time Search. Refer to Fig 7-4.

② The highlight date in the area ② indicates recorded data. Select the date in area ② and record channels in area ③.

③ Click “Search” button. The record data will be displayed in the data information list box.

④ Set the data playing time and display mode in the area ① as required.

⑤ Click “Play” button to playback.

Fig 7-4 Time Search Interface

⑥ Click the relevant buttons in the interface for operation, like FF, pause, change channel

mode, etc. Refer to Fig 7-5.

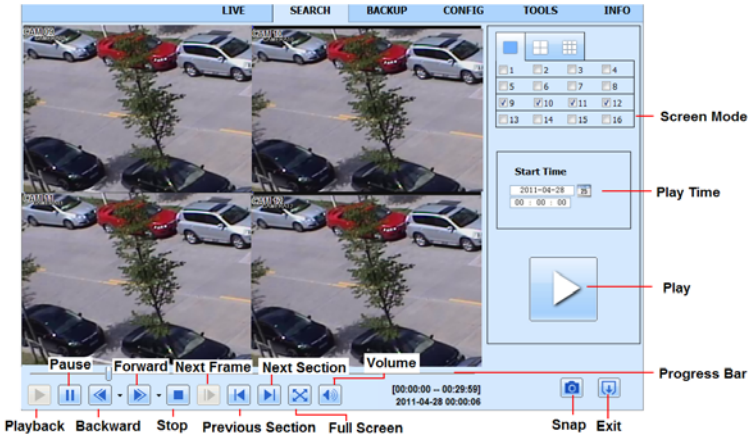


Fig 7-5 Time Search Playback

By Event Search:

① Go to Search→Event Search interface. Refer to Fig 7-6.

② Click the highlight date and select record channels.

③ Checkmark the event type: motion.

④ Click “Search” button.

⑤ Double-click certain item to play.

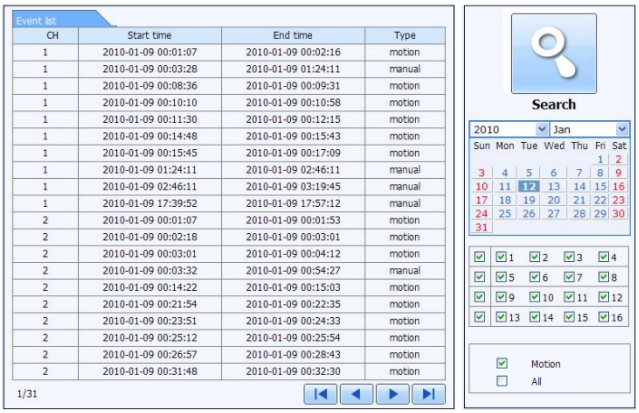


Fig 7-6 Event Search Interface

File Management:

① Go to Search→File Management interface. Refer to Fig 7-7.

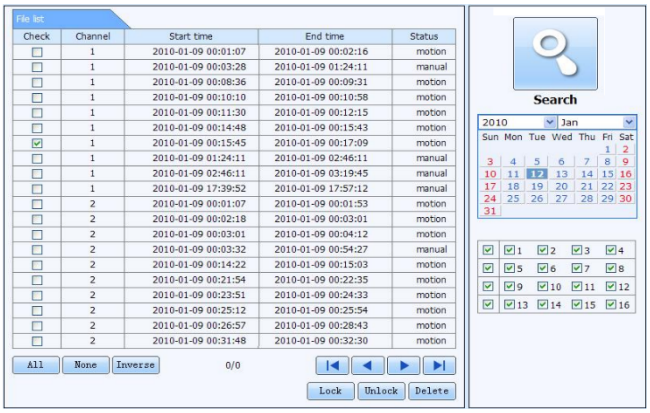


Fig 7-7 File Management Interface

② Select highlighted date and channels.

③ Click “Search” button to search the recorded files.

Lock: Select certain file item in the file list box and then click “Lock” button to lock this file that ca not be deleted or overlaid.

Unlock: Select a locked file and then click “Unlock” button to unlock this file.

Delete: Select an unlock file and then click “Delete” button to delete this file from file list.

8.5.2 Remote Backup

Click “Backup” button to go to backup interface. Please refer to Fig 7-8.

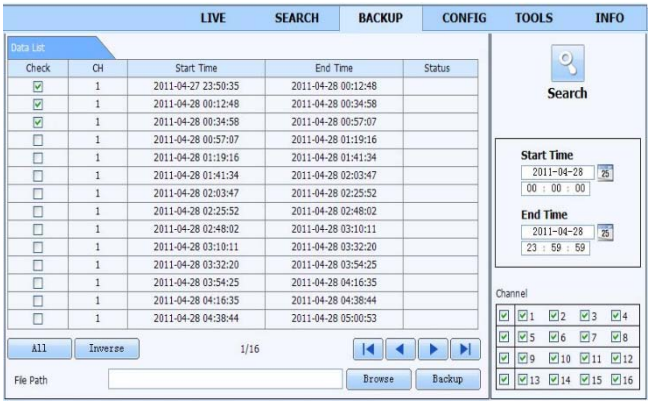


Fig 7-8 Remote Backup Interface

① Select channels, set the start and end time and then click “Search” button to display the file information in the file list box.

② Select backup files and click “Browse” button to set the save path. Then click “Backup” button to start backup. The backup files will be saved on user’s PC.

8.6 Remote System Configuration

You can do remote setup of the device which includes functions like basic configuration, live configuration, record configuration, schedule configuration, alarm configuration, network configuration, PTZ configuration and user configuration. You should select an option from the menu list on the left and then set up the relative parameters. Only one user can do configuration setup at a given point of time. Click Config tab to go to the below interface

The sub menu list and the options in every menu are similar to that of the DVR. Please refer to Chapter 4 Main Menu Setup Guide for more details.

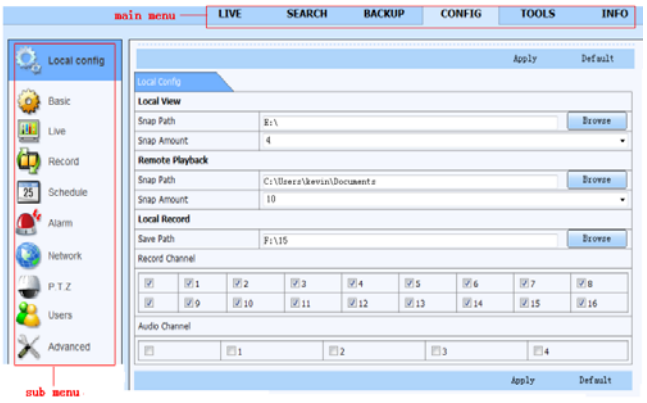


Fig 7-9 Remote Menu Setup

8.7 Tools

Click on the tool’s tab to access the Disk Management tool. The user can view the status of the hard drive(s), view/change the read write properties and format the hard drive(s).

8.8 Remote Management

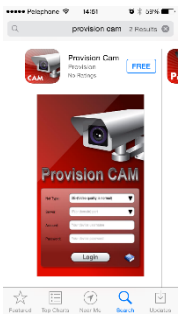
The Info interface provides a web based interface to access the general information pertaining to the DVR’s settings. The interface includes five submenus: System, Event, Log, Network and Online users.

Note: *There may be subtle differences with respect to functions of remote surveillance between through IE and through Apple PC. Here we only take IE remote access for example.*

8.9 By Phones with iPhone OS

- **Install through iPhone.**

Step 1: Open App Store software as shown in the figure on the left.
Step2: Search “Provision Cam” and click “Get” button as shown in the figure on the right.



Step 3: Click “Install App” button as shown in the figure on the left.
Step 4: Input iTunes Store password and then click “OK”.
The software will be installed automatically.

- **Install Software through PC**

Step 1: Install iTunes store in PC and then login.

Step 2: Connect iPhone and PC.
Step 3: Search “Provision Cam” and select it.
Step 4: Click “Download” button.
Step 5: Input username and password.
Step 6: Synchronously apply "Provision Cam" software to iPhone/iPad.

- **"Provision Cam" Instructions**

1. Login

Step 1: Choose network type. There are two network connection ways:
3G/3G +WIFI, well video quality. This network supports main stream and sub stream. The real-time image will be displayed by using sub stream.
3G-, poor video quality contrast to the above mentioned network.

Step 2: Input server, account and password.
Server: Option 1 (available only if NAT P2P server is enabled, please refer to section 5.6.4): Click on the small QR code icon in the bottom of the login screen then snap the QR code from the sticker on the DVR or from the DVR interface (Menu → Information → QRCODE).
Server, Option 2: WAN IP address (or domain name) plus HTTP port of the device. For example: 210.21.183:89 or 123.dvrdydns.com:89. **Note: The default http port of the device is 80. If this port is modified, please use the modified port.**
Account and Password: The login account and password of the device. The default account is admin and the default password is 123456.
Step 3: Click【Login】button to access the device.

2. Main Interface

There are many buttons in the main interface, such as, screen mode, favorite channel, snap, record, open/close audio, talk, PTZ., etc.

：Image view button. The pictures snapped in the live will be checked by clicking this button.

：Playback button. Click this button to enter into playback interface.

：Settings button. Click this button to set local configuration (Some can also support remote configuration).

：Information button. Click this button to check lots of information

including local information, device information, network information, etc.

：Server list button. Click this button to add server list.

：Help button. Help you know about the use of this software quickly.

：CMS button. Make you preview the live image of multi-devices.

：Log off button. Click this button to return to the login interface.

：Screen mode button. You can choose 1，4，6，8，9，13 or 16 screen display mode.

：Favorite channel display button. If you save your favorite channel in the favorite server list, clicking this button will directly play all favorite channels you have saved.

：Snap button. Choose the channel and click this button to capture the channel image.

：Local record button. Choose the channel and click this button to start recording.

：Open/Close audio. Choose the channel and click this button to open/close the audio of this channel.

：Open/Close talk. Click this button to pop up the servers which support talk function. Select the device to start talking.

：Set video parameter button. Select the channel and click this button to set the video parameters including brightness, hue, saturation and contrast.

：PTZ button. Click this button to pop up PTZ control panel.

：Choose bitrate priority or quality priority according to your network condition.

Channel indicator instruction:

：Video loss

： Schedule recording

：Others

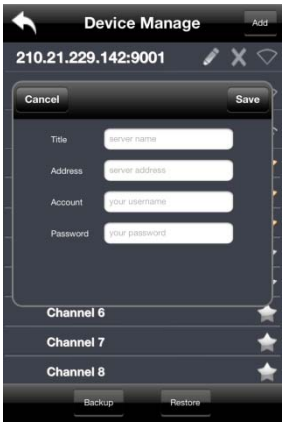
：Sensor alarm

：Motion alarm

：Motion /sensor alarm based recording or manual recording

3. Server list

Click button to pop up the following picture.



➢Add device: Click “Add” button in the top right corner to pop up a dialog box as shown in the following left picture. Input the relative information of the device and click “Save” button.

➢ Delete device: Click button behind the device name to delete this device.

➢ Edit device: Click button behind the device name to edit the information of this device.

➢ Backup & restore: It is recommended to click “Backup” button to reserve the information of all devices. Then you can click “Restore” button to restore all device information after you re-install the client or reset the device.

➢ indicates the device has been connected;

➢ indicates the device is connecting;

➢ indicates the device is not connected.

4. Live Preview

Once you access the device, the system will automatically display the screen mode in accordance with the channel number of the device

Note: The maximum number of channels which can be connected are nine after login.

1. Click “Screen mode” button to select channel as shown in Fig 1.

2. When there is video playing in a screen, you can switch the channel by long pressing the screen as shown in Fig 2.

3. When no video is playing in a screen, click this screen to choose channel as shown in Fig3.

4. When the single channel is playing, you can zoom in/out the image by swiping you finger up and down as shown in Fig 4.

5. When the single channel is playing, the channel can be switched by swiping your finger left or right as shown in Fig 5.

6. When multi channels are playing, drag one channel screen to the other channel screen. This will make

these two channels change the position of each other.

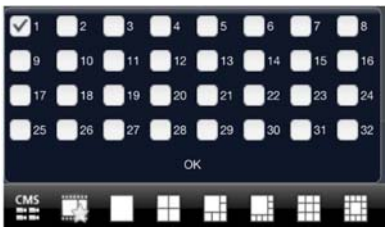


Fig 1

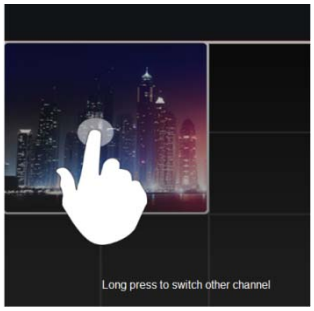


Fig 2

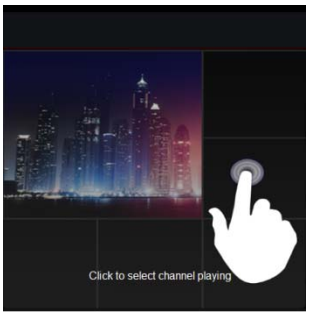


Fig 3

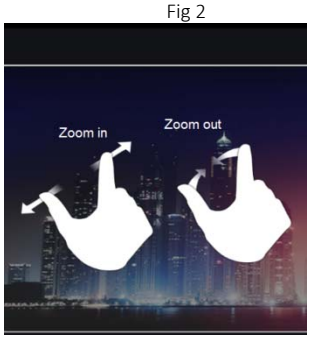


Fig 4

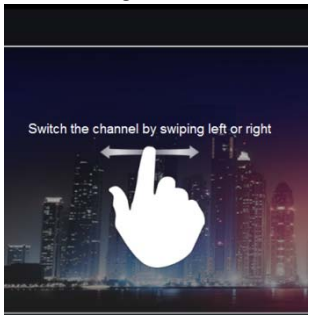


Fig 5

5. CMS Function

This function makes multi-device managements and preview come true.

Step 1: Click

to enable CMS function. When this icon turns green, it means this function is enabled.

Step 2: Click

to choose channel as shown in the right picture. After you choose the channel, click "ok", the system will display the related image automatically.

- If channels have been added into the group, you can see the images by clicking the group name.
- On viewing the group channel images, click button and select channels to check other channel images.
- Click "Exit CMS" to exit CMS mode and return to the main interface of the device.

6. Favorite Channel/Group

There are two kinds of favorite channels: favorite channels of the device and favorite group of CMS.

- **Favorite channels of the device**

  Step 1: Click to enter into device management list. Click the device name to extend channel. Enlighten the channels to save favorite channels as shown in the following picture on the left.

  Step 2: Return to the main interface and click button to play the favorite channels.

- **Favorite groups of CMS**

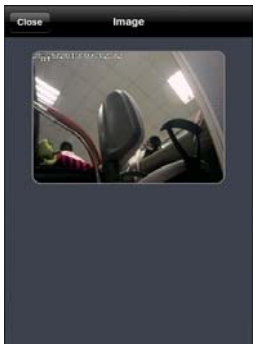
  Enable CMS function and enlighten the group to save the favorite groups as shown in the following picture on the right.

  Then click button to play. Only one favorite group can be collected.

: Color means the channel or group has been collected. Grey means the channel or group isn't collected.

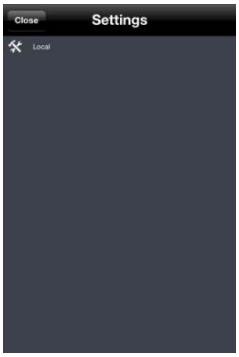
7. Playback Interface

Click "Playback" button to enter the playback interface. Then click "Search" button to search the file. To play the record by click this file name.



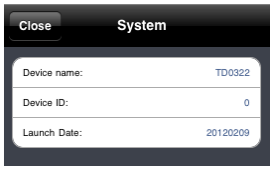
8. Image View

Click button to view the captured pictures.



9. Settings Interface

In this interface, you can configure the local settings.

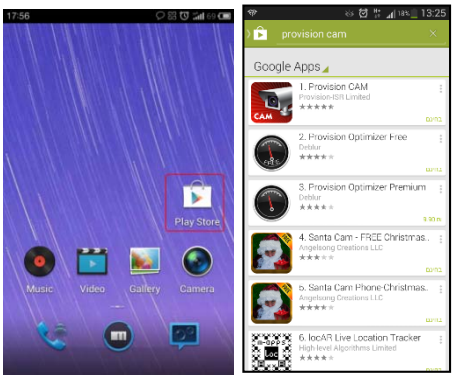


10. Information Interface

In this interface, you can view system information.

8.10 By Phones with Android

Software Installation



Step 1: Run "Play Store" (or Google market) program.

Step 2: Search "Provision Cam".

Step 3: Press "Install" button.

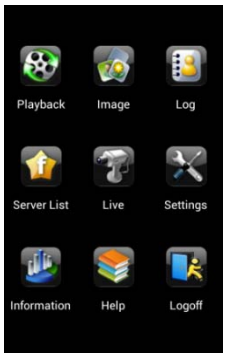
Step 4: Install the software subject to the notes. Once the downloading is done, the software will install automatically

Login Menu

Step 1: Choose network type. There are two network connection ways:
3G/3G +WIFI, well video quality. This network supports main stream and sub stream. The real-time image will be displayed by using sub stream.
3G-, poor video quality contrast to the above mentioned network.
Step 2: Input server, account and password.
Server: Option 1 (available only if NAT P2P server is enabled, please refer to section 5.6.4): Click on the small QR code icon in the bottom of the login screen then Snap the QR code from the sticker on the DVR or from the DVR interface (Menu → Information → QRCODE).
Server, Option 2: WAN IP address (or domain name) plus HTTP port of the device. For example: 210.21.183:89 or 123.dvrdydns.com:89. **Note: The default http port of the device is 80. If this port is modified, please use the modified port.**
Account and Password: The login account and password of the device. The default account is admin and the default password is 123456.
Step 3: Click【Login】button to access the device.

	PTZ
	Snap
	Record
	Talk
	Enable/disable audio
	Hide
	Playing favorite channel

Main Menu



Live View

Record Playback:

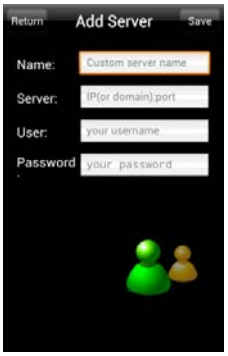
	The first picture
	The previous picture
	Next picture
	The last picture
	Zoom in
	Zoom out
	Delete

Click “Playback” in the main menu interface to enter playback interface. Then choose the channel you want to playback. This will take you to see the record file. Click this file to play.

	Pause/Play
	Stop
	Forward
	Backward

Server List:

In the main menu interface, click “Server list” to see the above picture on the left hand.

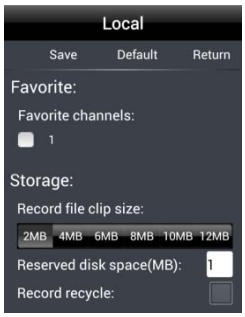


Add Server: Click button to pop up a window as shown in the above picture on the right hand. Enter the name, server, user and password of the device you want to add. Then click “Save” button to save the server. When you log in next time, you can choose and quickly access this server by clicking the little triangle button in the server column.

Modify Server: Click button to modify the server information. Delete Server: Click button to delete the server information.

Settings:

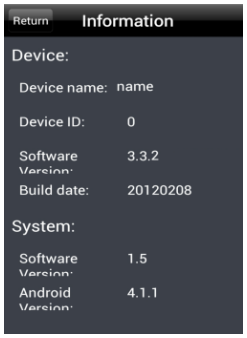
In the main menu interface, click “Settings” to enter the settings interface where you can configure local settings. Click “Local” to enter local settings interface. In this interface, you can set favorite channel and storage.



Favorite Channel:

Check the favorite channels and click “Save” button to save these channels. Then go into live interface and click button to play these favorite channels.

Storage: Setup the relevant parameters of mobile video.



Information View: view the DVR/NVR basic information as shown in the picture on the right.

Appendix A: FAQ

Q1. Why the DVR doesn't turn on after connecting to the power?

a. The power adapter could have gone bad. Please change a new power adapter.
b. The power from the adapter may be not enough for operating the DVR. Please use the power adaptor supplied along with the DVR.
c. It could be a hardware problem.

Q2. The DVR LED turns on but there is no output, why?

a. The power from the adapter may be not enough for operating the DVR. Please use the power adaptor supplied along with the DVR.
b. It could be a wiring issue. Please check the connection for the same.
c. Check the monitor settings.

Q3. Why are no images displayed on few or all channels of the DVR?

a. It could be a wiring issue. Please check the cable and the ports of the cameras and DVR.
b. The problem can also be related to cameras. Please check the same.
c. Please make sure that the channels are not programmed as hidden channels and check the status from admin login.

Q4. The HDD cannot be found.

a. The power from the adapter may be not enough for operating the DVR. Please use the power adaptor supplied along with the DVR.
b. It could be wiring issue. Please check the power and data cables of the HDD.
c. The HDD could have gone bad. Change a new one.

Q5. The DVR cannot record.

a. Make sure the HDD was formatted prior to use.
b. Maybe the user hasn't enabled the record function or has done incorrect setup. Please refer to Chapter 5.
c. Maybe HDD is full and thus the DVR is not able to record. Check HDD information from Disk Management and if required, please enable the recycle function.
d. The HDD could have gone bad. Please change another one.

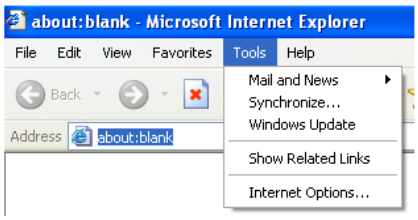
Q6. Mouse doesn't work.

a. The mouse should be connected to the USB port at the rear side.
b. After connecting the mouse, allow the DVR to detect the mouse for seconds. If not detected, try restarting the DVR.
c. The mouse may be incompatible. Please change a mouse.

Q7. ActiveX control cannot be downloaded.

a. IE browser blocks ActiveX. Please do setup as per the steps mentioned below.

① Open IE browser. Click Tools→Internet Options.



② Select Security→Custom Level. Refer to Fig 7-1.

③ Enable all the sub options under “ActiveX controls and plug-ins”. Refer to Fig 7-2.

④ Then click Ok to finish setup.

b. Other plug-ins or anti-virus blocks ActiveX. Please uninstall or do the required settings.

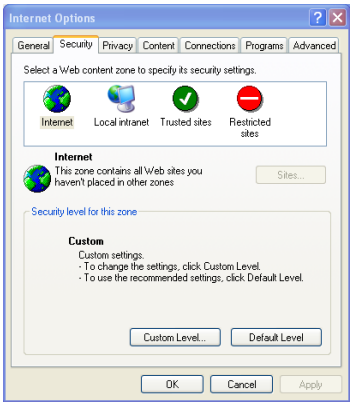


Fig 7-1

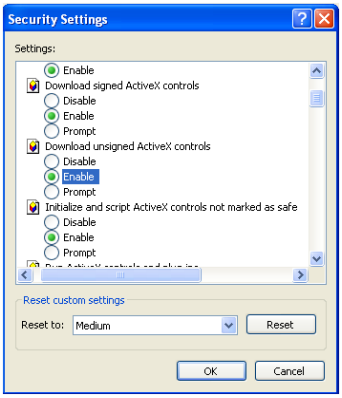


Fig 7-2

Q8: DVR displays “please wait...”all the time.

a. HDD power cable and data cable may not be well connected. Please check the connections for HDD.

b. It is also possible that the DVR was forced to stop because HDD has a bad sector and it may have caused the system to halt. Check with a good known HDD or try formatting the existing HDD.

Q9: How to input password and digital numbers?

Click the password or the input box to pop up a small keyboard. Please select characters to be input (the initial password is 123456), or you can use the digital keys on the front panel, or

the digital keys on the remote controller.

Q10: A hard disk is being identified as a new device however it was being used with another DVR of same model. Should it be formatted prior use?

It is possible to migrate an HDD from one DVR to another provided that the DVRs are of the same model and that the HDD being migrated would be used as the sole disk in the new DVR. However in cases where the new DVR already contains a HDD, the migrated disk being installed would have to be formatted. In general migrating disks from one DVR to another is not recommended.

Q11: What is the minimum configuration required for remote monitoring?

PC Module	Parameters
CPU	Intel Celeron 2.4G
Motherboard	Intel 845
HDD	80G
RAM	512M
VGA	NVIDIA GeForce MX440/FX5200 ATIRADEON 7500/X300
OS	Windows 2000(SP4 above) /Windows XP(SP2 above) /VISTA
DirectX	9.0

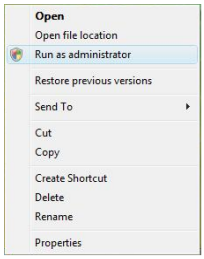
Q12: How to handle the situation that the codec Control is blocked when downloading in the VISTA or Win7 system?

This problem can be fixed in two ways:

a. Enter Control Panel→User Account and Family Safety → User Account Control (refer to the following figure) and click Turn User Account on or off. Cancel Use User Account Control (UAC) to help protect your computer.

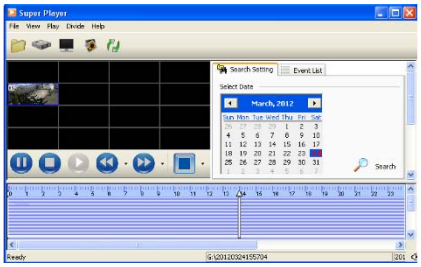
Turn User Acco...
Search
Turn on User Account Control (UAC) to make your computer more secure
User Account Control (UAC) can help prevent unauthorized changes to your computer. We recommend that you leave UAC turned on to help protect your computer.
Use User Account Control (UAC) to help protect your computer
OK
Cancel

b. Right click IE browser (refer to the following figure) and select Run as administrator to run browser.



Q13. How to play the backup file?

Insert your USB device where the backup files are saved in the USB port of PC. If your files are saved in DVR format, you must have already downloaded the backup player box before doing backup. Then double click to open your USB disk to find your backup files and backup player. Double click icon to install backup player. After you install it, open this player and click "Open Path" button to open your backup file. Next, click play button to play the backup file. Double click the image and then right click to enable audio. If you save your backup files in AVI format, you can directly open your file by using the media player which supports this format.



Appendix B: Calculate Recording Capacity

You can calculate the size of hard disk according to the storage time and NVR recording settings. The formula is as follows in full frame rate condition. Used space per hour (MB/h) = Bitrate(kbps) ÷ 8 × 3600 ÷ 1024. The below are the details at different settings.

Resolution	Frame Rate	Bit Rate (kbps)	Used Space(MB/h)
3MP 1080P	30fps (NTSC)	12M	5400
		8Mb	3600
		7Mb	3150
		5Mb	2250
		4Mb	1800
720P 1080P 3MP	30fps (NTSC) 15fps (NTSC) 15fps (NTSC)	6Mb	2700
		4Mb	1800
		2Mb	900
		1Mb	450
		256Kb	113
960H	30fps (NTSC)	2Mb	900
		1.5Mb	675
		512Kb	225

The calculation format is: **Total Recording capacity =Used space per hour (MB/h) (coverage rate of hard disk) × recording time (hour) ×channel numbers**

For instance, one customer sets resolution to1080P, frame rate to 15fps, bitrate to 4M and enables total 4 channels. He wants the unit to record continuously in a month. Below is the calculation:

Total Recoding capacity =900 (mb/h) X 24(hours/day) X30(days) X4 (channels)= 2592000 (MB)=2531.25(GB)

Therefore, customers just install one SATA HDDs with 3TB, it can almost record for one month.

Appendix C: Compatible Devices

1. Compatible USB drive after test.

Brand	Capacity
SSK	512MB, 1G, 2GB
Netac	4GB
Kingston	2GB
Aigo	2GB
Smatter vider	1GB
SanDisk	4GB

2. Compatible HDD list

Brand	Capacity
Tested Capacities	80G / 160G / 250G / 320G / 1.5T / 2TB / 3TB / 4TB (From version 3.4.3 and higher)

Notes: